DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021765
Date Inspected: 14-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name:	See Items Observed			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

A). Field Splice W5/W6
B). Pipe Welding
C). QA Verification

A). Field Splice W5/W6

The QAI observed the welder, Wai Kitlai ID-2953, perform the welding to correct the excessive root opening of 8 mm on the longitudinal stiffener located at the field splice W5/W6 and identified as WN: 5W-6W-A-LS 1. The QAI also observed, Xiao Jin Wan ID-9677, perform the Complete Joint Penetration (CJP) welding of the weld joint identified as WN: 5W-6W-A-LS4. The welders performed the welding utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-1012-3, Rev. 0. The welding was performed in the vertical (3G) position with the work placed in an approximate vertical plane and the groove approximately vertical. The welding parameters were recorded by the QC inspector as 121 amp. The welders utilized a slag hammer and a wire wheel attached to a 4" high cycle grinder to remove slag after deposit each fill pass. The electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers and the exposure limits of the electrodes identified as E9018-H4R and the minimum storage oven temperature of 120 degees Celsius appeared to be in compliance with the contract documents. The WPS was also utilized by the QC inspector, Gary Ehrsom, as a

reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat temperature of 100 degrees Celsius and the interpass temperature of 230 degrees Celsius. The welding parameters and surface temperatures were verified by the QC inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

B). Pipe Welding

The QAI observed the welder, Rick Kiikvee-ID-5319, perform the CHP welding of the field welds identified as 17-4-W2-W, 18-4-W2-W and 19-4-W2-W. The welding was performed utilizing the Weld Procedure Specification (WPS) identified as 1-12-1 which was also utilized by the QC inspector, Steve Jensen, to monitor the welding and to verify the welding parameters.

Later in the shift the QAI observed the QC inspector perform a visual weld inspection of the above mentioned welds and no issues were noted by the QC inspector. The QAI concurs with the QC inspector's assessment.

C). QA Verification

The QAI performed an Ultrasonic Test (UT) of the CJP welds identified as WN: 4W-PP24.5-W5-LSE, LSW, TS and 2E-PP13.5-E5. The areas were tested 10% to verify that the welds and testing by QC meet the requirements of the contract documents. The examination was performed as per the contract documents and a ultrasonic test report, TL-6027 and a TL-6028 was generated on this date.

The digital photographs below illustrate some of the work observed during this scheduled shift.

Summary of Conversations:

There were general conversations with Senior Quality Control Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of American Bridge/Fluor welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for

your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer